

What is claimed is:

1. A method for scanning data, comprising:

receiving an electronic document;

determining the electronic document is an archive file;

5 applying risk-assessment heuristics to the electronic document to

determine a risk factor for scanning the electronic document;

assigning a scanning priority to the electronic document based at least in
part on the risk factor, said scanning priorities including low scanning priority, normal
scanning priority, and discard without scanning; and

10 scanning the electronic document according to the scanning priority.

2. The method of claim 1, further comprising:

receiving an E-mail having the electronic document as an attachment;

15 inspecting, as part of said scanning the electronic document, for viruses.

3. The method of claim 1, further comprising:

selecting a scanning thread, from plural scanning threads having
associated thread execution priorities, having an execution priority at least as high as
said assigned scanning priority; and

20 assigning performance of said scanning the electronic document to said
selected scanning thread.

4. The method of claim 3, further comprising:

disposing the method within a multi-processor computing device;

designating a first processor to process at least low scanning priority

threads; and

assigning said selected scanning thread to the first processor.

5 5. The method of claim 1, wherein risk-assessment comprises:
determining if the electronic document is an archive containing files; and
if so, then a selected one of determining if the archive contains a sub-
archive, determining if an aggregate de-archived size for said files exceeds a first
threshold, determining if a file count of said files exceeds a second threshold, or
10 determining if a file-type count of said files exceeds a third threshold.

6. The method of claim 5, wherein the first threshold is 10 megabytes,
the second threshold is 50 files, and the third threshold is 10 file types.

15 7. The method of claim 1, further comprising:
determining if electronic document is an archive containing files;
if so, then determining if an aggregate de-archived size for said files
exceeds a first threshold;
if so, then determining if the aggregate de-archived size exceeds a disk
20 space threshold; and
if so, then setting the scanning priority of the electronic document to low
scanning priority.

8. The method of claim 1, further comprising:
25 determining if electronic document is an archive containing files;

if so, then determining if an aggregate de-archived size for said files exceeds a first threshold;

if so, then determining if a volatile memory requirement for scanning the archive exceeds a memory requirement threshold; and

5 if so, then setting the scanning priority of the electronic document to low scanning priority.

9. The method of claim 1, further comprising:

first determining if the electronic document is an archive containing files;

10 second determining if at least one file of the archive is a sub-archive;

third determining if an aggregate de-archived size for the archive exceeds a disk space threshold;

fourth determining if a file count for the archive of said files exceeds a file count threshold; and

15 if each of said first, second, third and fourth determining evaluate true, then setting the scanning priority of the electronic document to discard without scanning.

20 10. The method of claim 1, in which the electronic document either is an archive, or contains the archive, the method further comprising:

determining the archive contains at least one sub-archive therein;

determining if the archive contains a large number of files; and

determining if an un-archived size for the archive exceeds a predetermined size limit; and

assigning the scanning priority to be discard without scanning if the archive contains a large number of files, and the un-archived size for the archive exceeds the predetermined size limit.

5 11. The method of claim 10, wherein if the un-archived size for the archive does not exceed the predetermined size limit, or the archive does not contain the large number of files, the method further comprising:

assigning the scanning priority to be low scanning priority.

10 12. The method of claim 1, in which the electronic document either is an archive, or contains the archive, the method further comprising:

determining if an un-archived size for the archive exceeds a size limit;

determining if a memory requirement for performing said scanning the electronic document exceeds a memory limit; and

15 assigning the scanning priority to be discard without scanning if the un-archived size for the archive exceeds the size limit, and the memory requirement for performing said scanning the electronic document exceeds the memory limit.

20 13. The method of claim 12, wherein if the memory requirement for performing said scanning the electronic document does not exceed the memory limit, the method further comprising:

assigning the scanning priority to be low scanning priority.

14. An article of manufacture comprising a readable medium having instructions encoded thereon, which when executed by a processor, are capable of directing the processor to perform the operations of claim 1.

5 15. The medium of claim 14, said programming instructions including further instructions to direct the processor to perform the operations of claim 2.

16. The medium of claim 14, said programming instructions including further instructions to direct the processor to perform the operations of claim 3.

10 17. The medium of claim 16, said programming instructions including further instructions to direct the processor to perform the operations of claim 4.

15 18. The medium of claim 14, said programming instructions including further instructions to direct the processor to perform the operations of claim 5.

19. The medium of claim 18, said programming instructions including further instructions to direct the processor to perform the operations of claim 6.

20 20. The medium of claim 14, said programming instructions including further instructions to direct the processor to perform the operations of claim 7.

21. The medium of claim 14, said programming instructions including further instructions to direct the processor to perform the operations of claim 8.

25 22. The medium of claim 14, said programming instructions including further instructions to direct the processor to perform the operations of claim 9.



23. The medium of claim 14, said programming instructions including further instructions to direct the processor to perform the operations of claim 10.

5

24. The medium of claim 23, said programming instructions including further instructions to direct the processor to perform the operations of claim 11.

25. The medium of claim 14, said programming instructions including further instructions to direct the processor to perform the operations of claim 12.

10

26. The medium of claim 25, said programming instructions including further instructions to direct the processor to perform the operations of claim 13.

009220"4662060